Policy and Regulatory Working Group

16 November 2021

Today's agenda

➢ Embedded Network Tariffs

- Design capacity structure for proposed embedded network tariffs.

➢ Reviewing Time of Use Windows

- Identify if changes are required to our time of use windows in our existing network tariffs.

➢ Customer Survey

- Share the results of a recent customer survey that focussed on solar PV, electric vehicles and battery storage.

➢ Prosumer Network Tariff

- Begin discussion on the introduction of a prosumer network tariff.

➢ Assignment Rule Changes

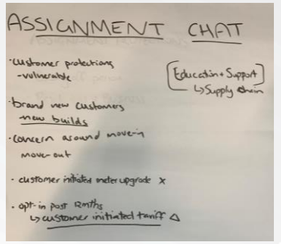
- Presenting what we've heard and the changes we are proposing.

What We Have Achieved So Far

Reviewed residential default network tariff

Tariff price incentive

Obsolete flat rate network tariffs



Assignment rules

Customer protections

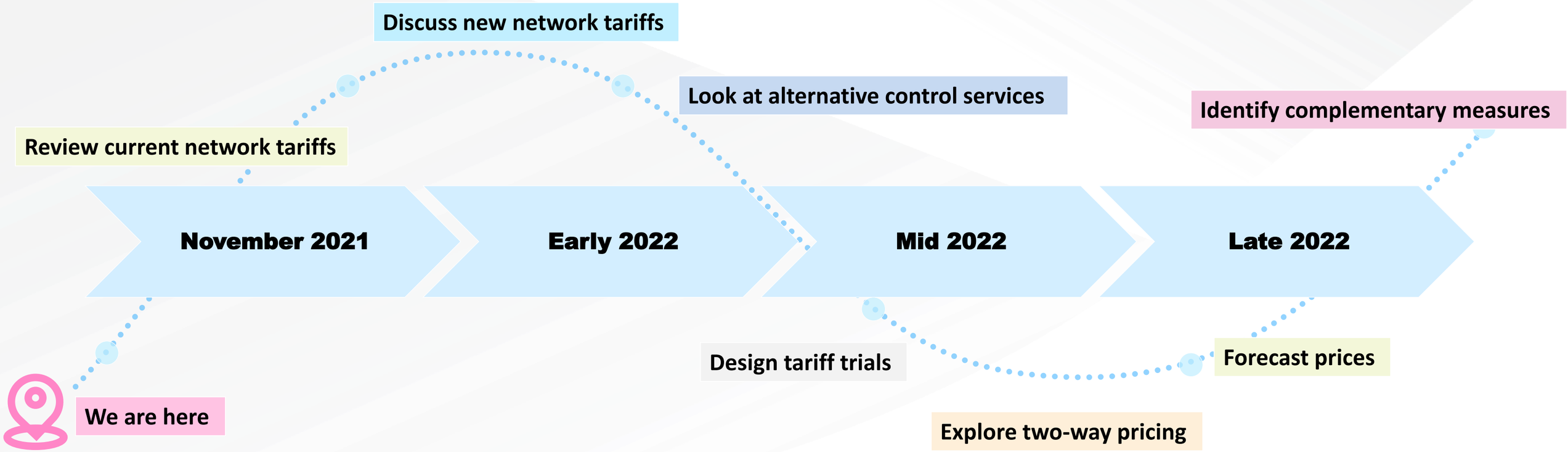
June 2020 | October 2020 | March 2021 | July 2021

Pricing principles

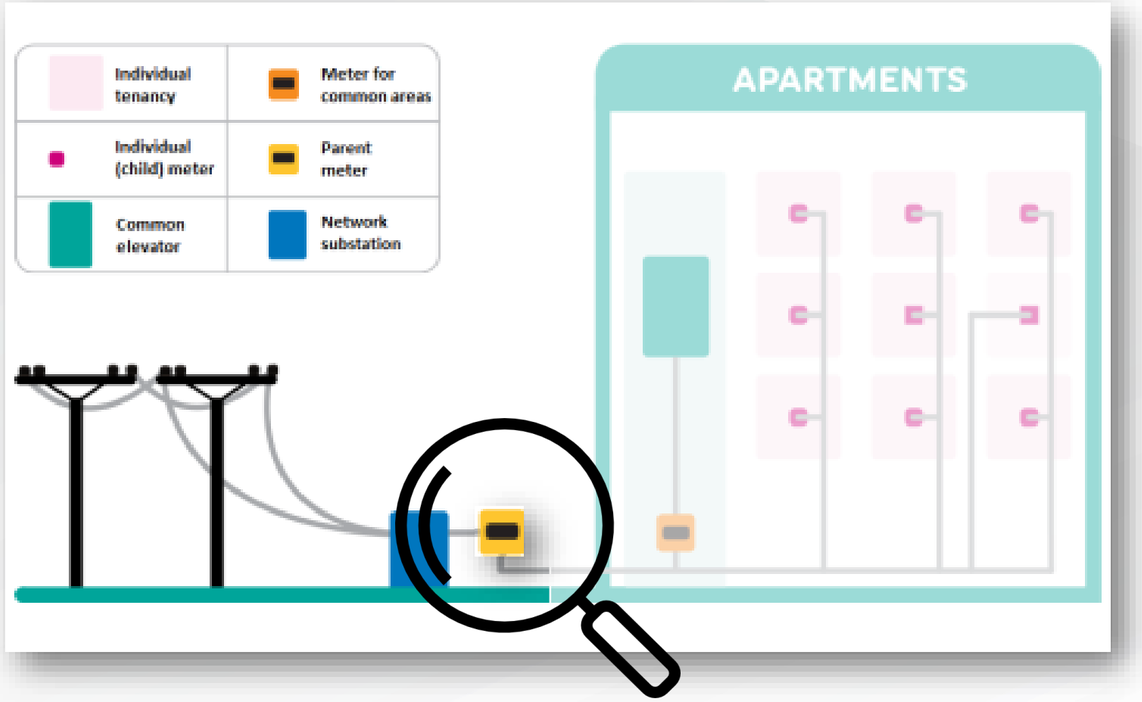
Tariff trial principles

Tariff trial ideas

Topics For Upcoming Engagement



Embedded Networks



- Embedded networks are private networks which serve multiple premises and are located within, and connected to, our distribution network through a single connection point.
- They can take electricity from a network in bulk and on-sell it to members of the embedded network.
- Can include caravan parks, shopping centres, apartment complexes, aged care facilities, retirement villages, big box centres or a multi-use combination.

Our customer

Distribution Network Service Provider (TasNetworks)

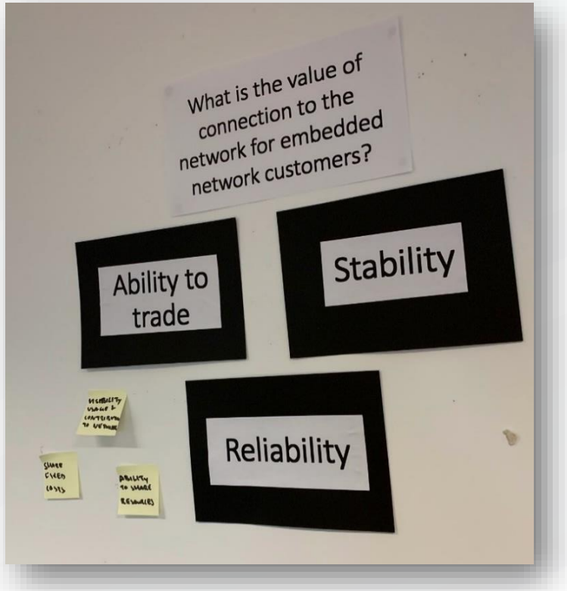
Embedded Network Manager

Embedded Network Operator

Embedded Network Owner

Embedded Network End User

Exploring options to reflect the value of connection



Value of connection

- Ability to trade
- Stability
- Reliability
- Share fixed costs

Capacity

A capacity charge seeks to reflect the costs associated with providing network capacity required by a customer on a long term basis.

Exploring options to reflect the value of connection

Brand	Phone and Plan Name and highlights	Data Allowance /billing period	Advertised Cost /billing period	
dodo	SIM only Postpaid **$20 Sim Only** ☑ Optus Network Coverage ☑ Unlimited Standard National calls and texts ☑ International talk 100 minutes to 35 selected countries ☑ $20 Plan for $10 for 2 months. Offer ends 31/1/22.	20GB	$10.00	Go to site min. total cost **$10.00** over **1** month period
Outstanding Value - SIM Only Mobile Plans				
Moose mobile	SIM only Postpaid **Moose 22 SIM Only - 12m** ☑ Optus Network Coverage ☑ Unlimited Standard National calls and texts ☑ Unlimited Voicemail Deposits and Retrievals ☑ Includes voice over LTE and WIFI calling	20GB	$22.00	Go to site **$22.00**/mth | min. total cost **$264.00** over **12** month period
TeleChoice	SIM only Postpaid **TC 24** ☑ Telstra Network Coverage ☑ Unlimited Standard National calls and texts ☑ Month to Month Plan ☑ Data Banking 150GB	14GB	$24.00	Go to site min. total cost **$24.00** over **1** month period

What is excess data?

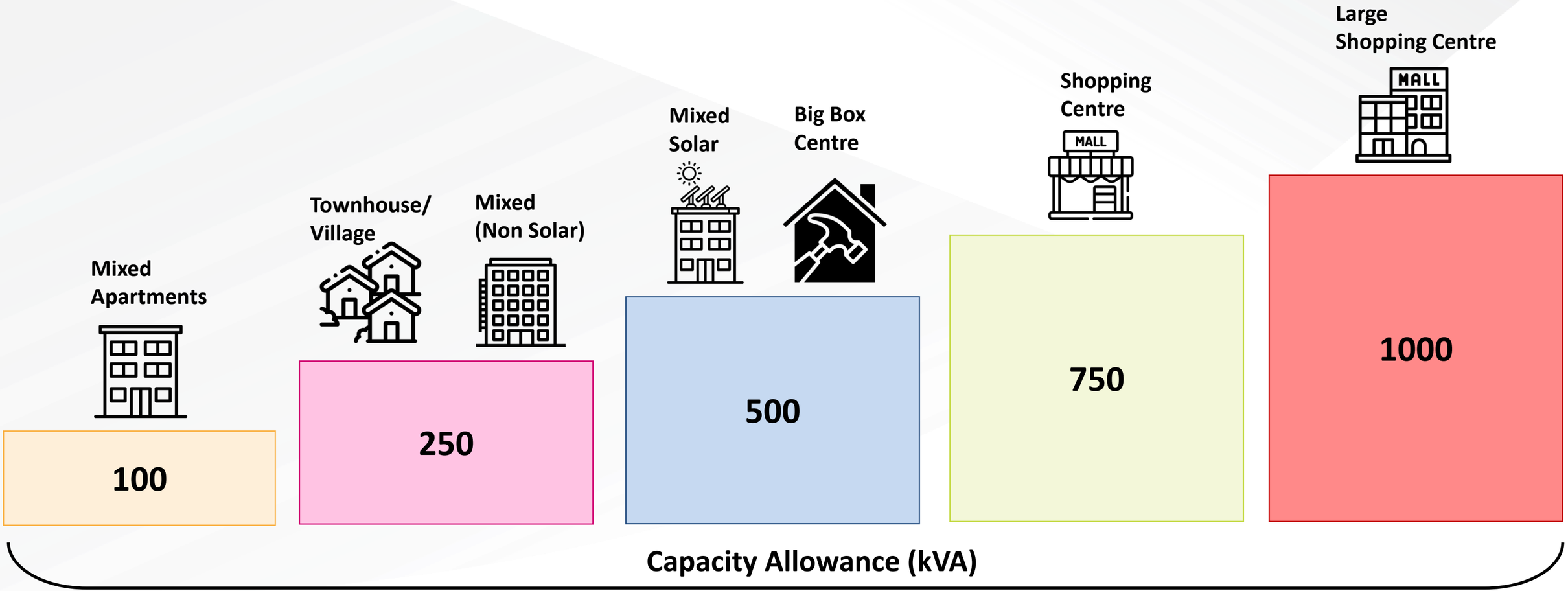
Excess data is charges incurred for the use of data in addition to your monthly plan allowance.

Exploring options to reflect the value of connection

"Brand"	Plan Name and Features	Capacity Allowance	Cost
TasNetworks Delivering your power	**1. Embedded Network #1** • Variable charges • Low Voltage • Excess demand charges	500 kVA	$
		1000 kVA	$$
		1500 kVA	$$$
	3. Embedded Network #2 • Variable charges • High Voltage • Excess demand charges	2 MVA	$$$
		2.5 MVA	$$$$
		3 MVA	$$$$$

Excess demand charges
Excess demand charges incurred for usage over your capacity allowance.

Help us design what a capacity allowance looks like for an embedded network tariff

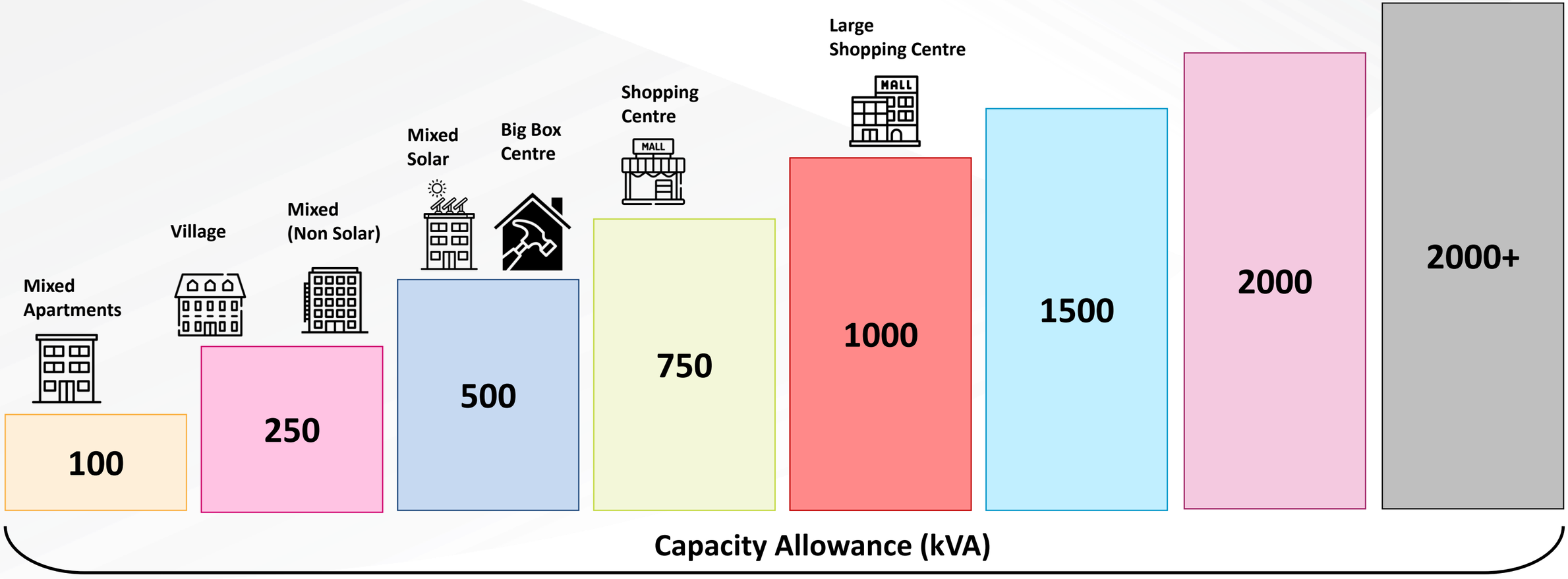


Question

- How can we design capacity charges to appropriately reflect the value of connection for embedded networks?

TasNetworks

Help us design what capacity allowance look like for an embedded network tariff



Break Time

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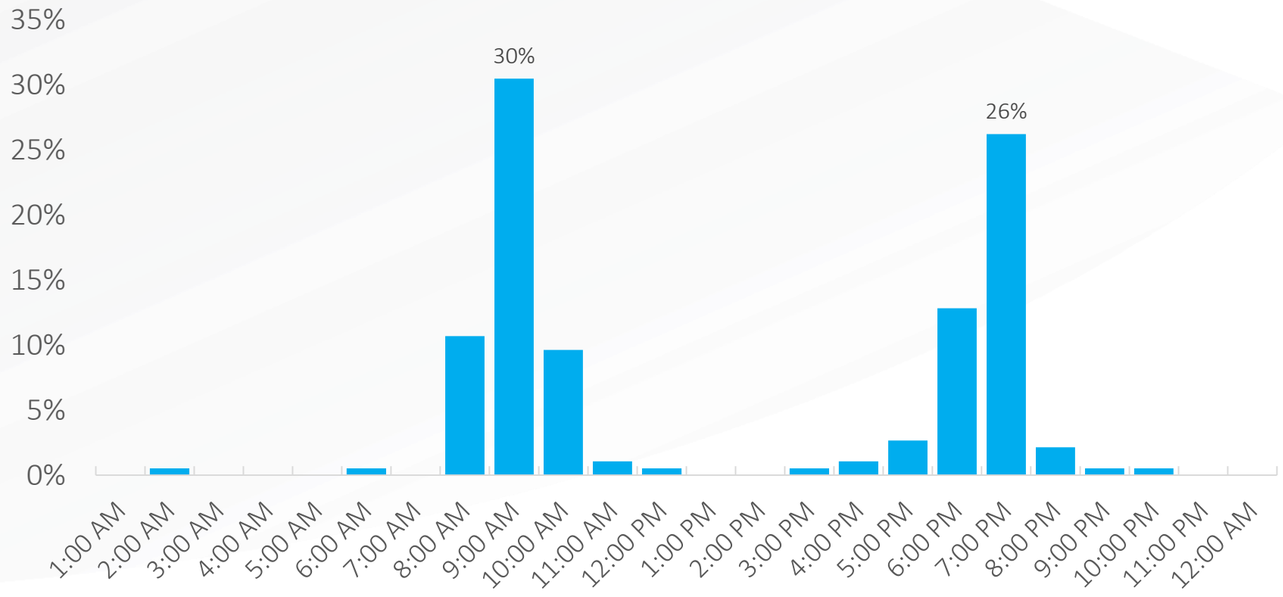
Reviewing our time of use windows

- Peak times based on our network demand profiles, which identify peak loads or capacity constraints.
- Network costs are driven by the need to meet peak demand across the distribution network.
- Tasmania's peak demand days occur over winter.
- Many of our time of use windows are well aligned to the substation winter peaks (7am to 10am and 4pm to 9pm).

Figure 1 – TasNetworks' zone substation peaks by hour of day for winter for 2016-2020



Small business time of use consumption review

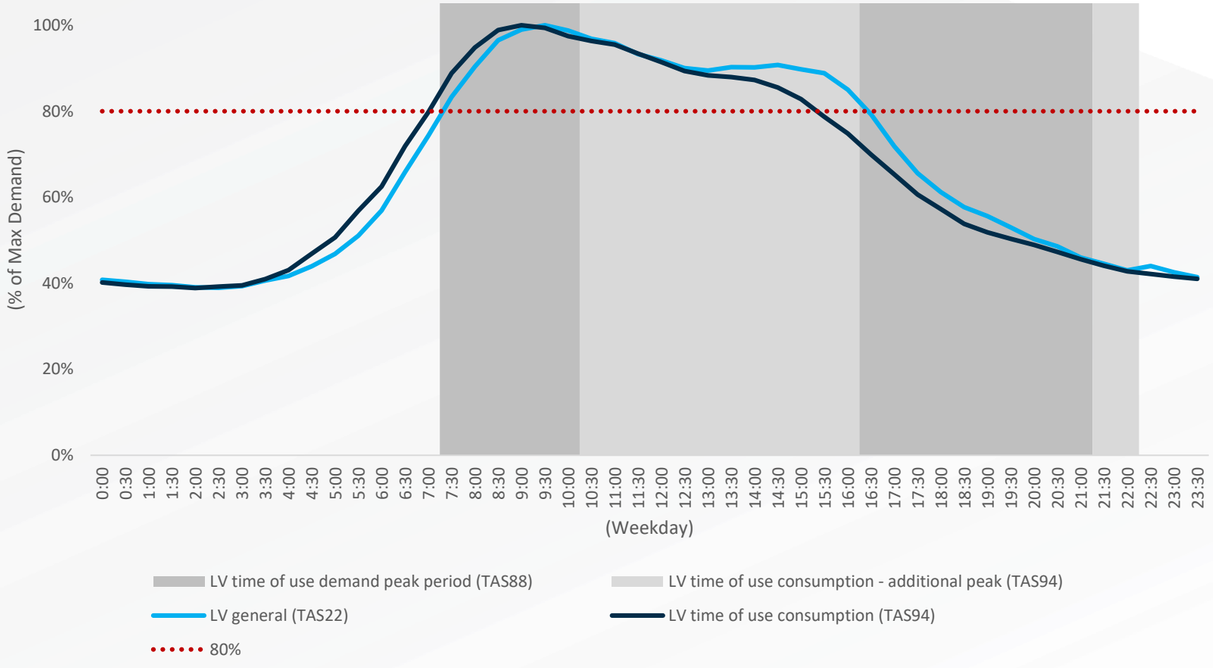
- Reviewed our current time of use windows across our network tariffs
- Found that the business time of use consumption network tariff (TAS94) could be better aligned to:
  - **reflect small business load patterns**; and
  - **times of high network utilisation.**
- Interested in our stakeholder's views on revising the peak windows for TAS94.

Peak
Shoulder
Off-Peak

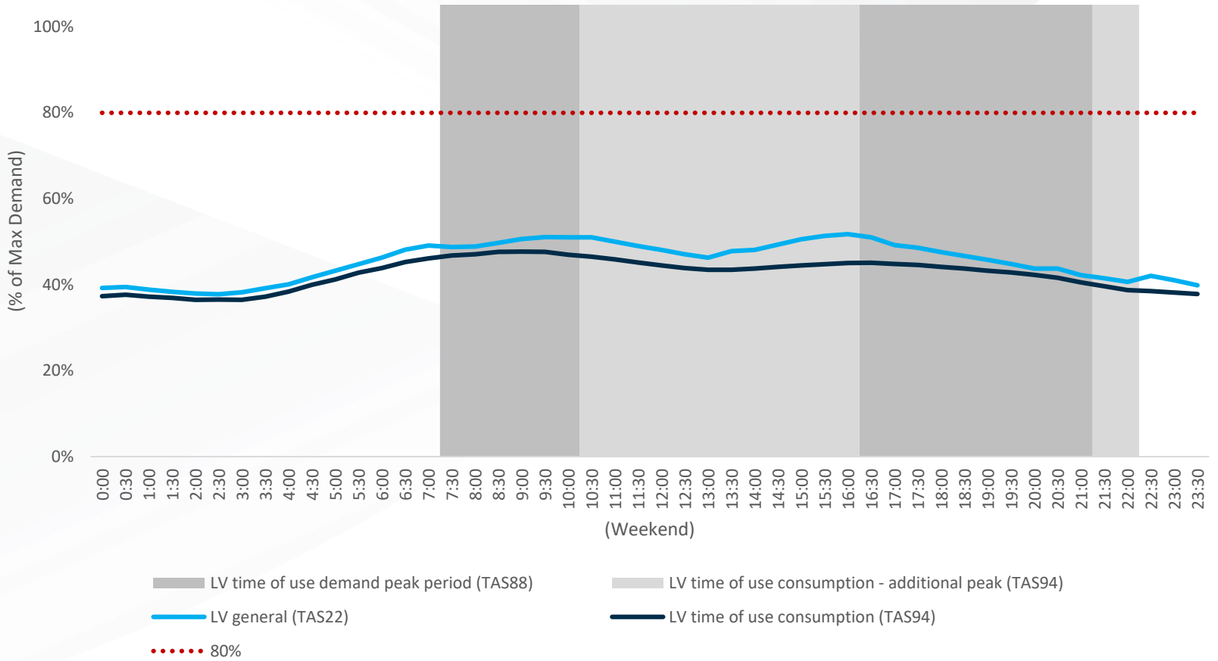
Tariff	Period	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Business ToU Consumption TAS94	Weekday								07:00 - 22:00																
	Weekend								07:00 - 22:00																
Business ToU Demand TAS88 / TAS98	Weekday								07:00 - 10:00									16:00 - 21:00							
	Weekend																								

Why we're proposing changes

Weekdays



Weekends



Small business time of use consumption review

Option 1: no change

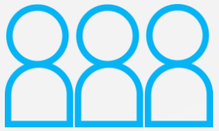
Option	Period	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Option 1	Weekday	Off Peak							Peak - 07:00 - 22:00																
	Weekend	Off Peak							Shoulder - 07:00 - 22:00																

Option 2: weekend shoulder, reduce peak and introduce midday shoulder

Option	Period	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Option 2	Weekday	Off Peak							07:00 - 10:00				10:00 - 16:00					16:00 - 21:00							
	Weekend	Off Peak							Shoulder - 07:00 - 21:00																

Option 3: weekend off peak, reduce peak and introduce midday shoulder

Option	Period	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Option 3	Weekday	Off Peak							07:00 - 10:00				10:00 - 16:00					16:00 - 21:00							
	Weekend	Off Peak																							

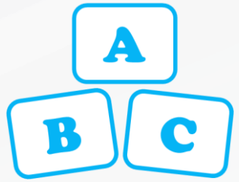


Affordable

We offer an essential service and recognise that customers want affordability in the delivered cost of electricity. To support this we will ensure sustainable network investment and that particularly vulnerable customers will not be exposed to hardship as a result of our pricing or network tariff reforms.

Fair

We will provide transparent and cost reflective pricing signals so that all customers contribute to their portion of total network costs.



Simple

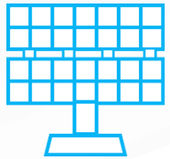
Our network pricing will be both cost reflective and easy for our customers, retailers and stakeholders to understand.

Consistent

We will avoid creating price shocks for customers and minimise upward pressure on the delivered cost of electricity.

Innovative

We will investigate innovative solutions that meet the changing needs of our customers and changes in technology.



Choice

We will not stand as a barrier for customers who invest in distributed energy resources, such as solar generation and battery storage. Our pricing will provide choice to our customers to best meet their energy needs, while not imposing on the needs of others or the network.

Menti Time

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Alignment to pricing principles

Tariff option	Fair 	Simple 	Consistent 	Innovative 	Choice 
1. No change					
2. Weekend shoulder, reduce peak & introduce midday shoulder					
3. No weekend shoulder, reduce peak + introduce midday shoulder period					

KEY:

★ ----------→ ★★★★★

Poor alignment with principle — Strong alignment with principle

Respondents

Common themes:

- Located in Hobart and own their own home.
- Full time employment, earn higher incomes and are over 55.
- High uptake of DER technology compared to the general population.

Electric Vehicle Owners

- Existing electric vehicle owners:
  - interested in powering their home from their vehicle if the technology was available;
  - charge their vehicle whenever it is convenient – this is mostly overnight or on weekends; and
  - observed changes in their energy use – particularly customers on a time of use tariff.
- Respondents considering purchasing electric vehicles in the next 10 years:
  - would charge their vehicles during off-peak times; and
  - cost is the main deterrent.

Solar Owners

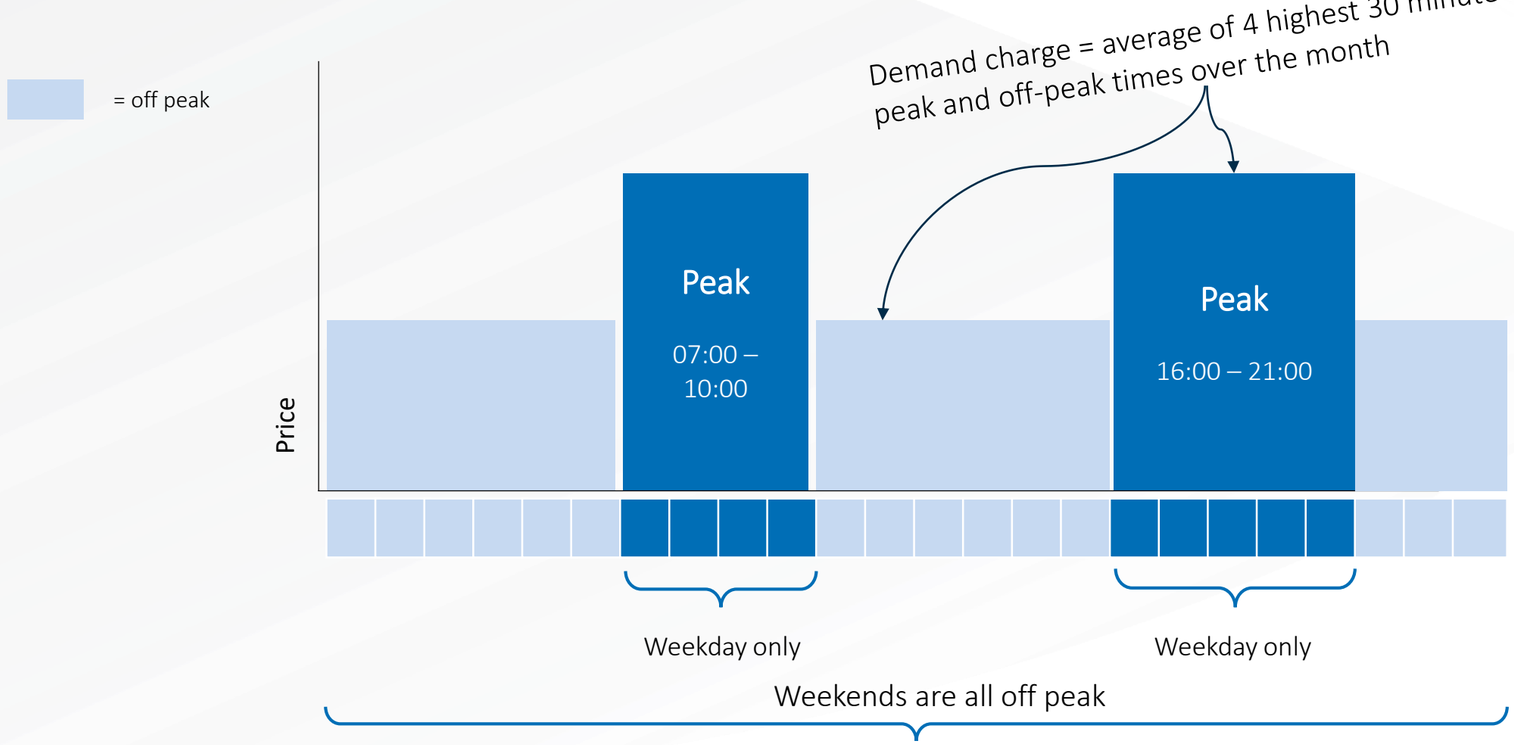
- Over half who don't currently own solar PV would consider purchasing it.
- Self consumption main investment driver for both solar and non solar owners.
- More than half of solar PV owners plan on installing a battery in the next ten years.

Battery Storage Owners

- The main driver is to utilise off peak rate and self consume during peak times.
- A high proportion of all non battery owners would not consider purchasing battery storage without solar PV, and most current battery owners don't use their battery on it's own, but in conjunction with other DER technologies.
- Key deterrents for non battery owner investment include: uncertainty around disposal, rate of return on investment and battery safety.

Residential distributed energy resources (TAS97)

- Price varies depending on the day and time
- Price is charged based on the ***average of the four highest daily readings*** over the month
- Applies where distributed energy resources are deployed behind the meter



Key points:

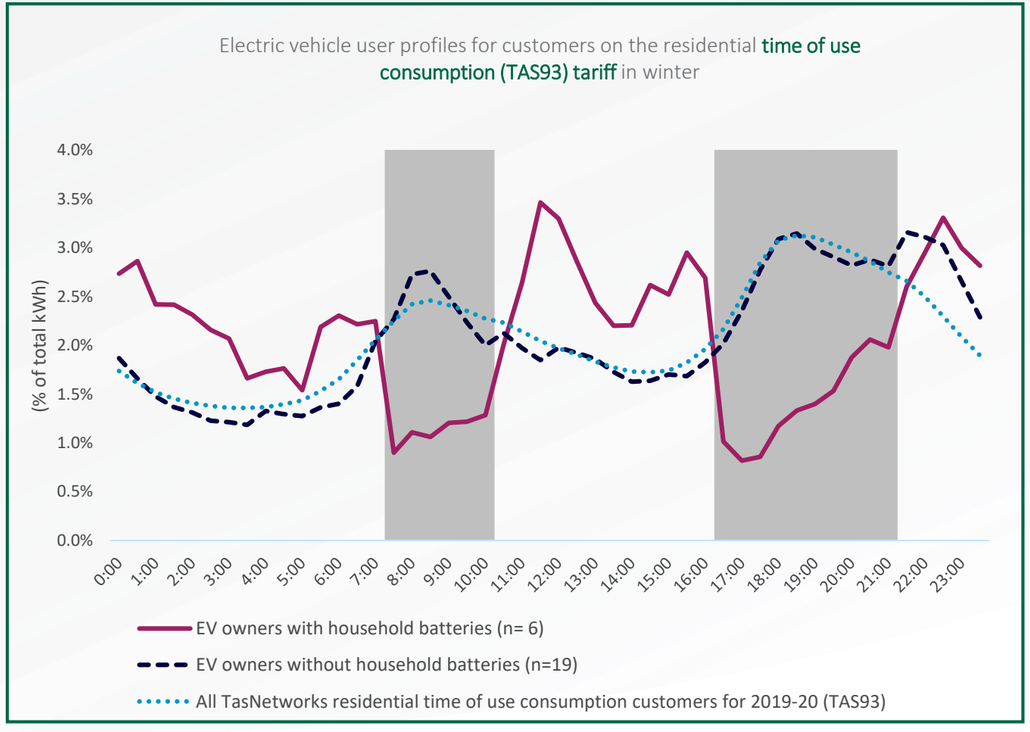
- Price is based on demand.
- The four highest demand (30 minute periods) are averaged each month for both peak and off-peak times.

Customer survey electric vehicle users results

Early findings

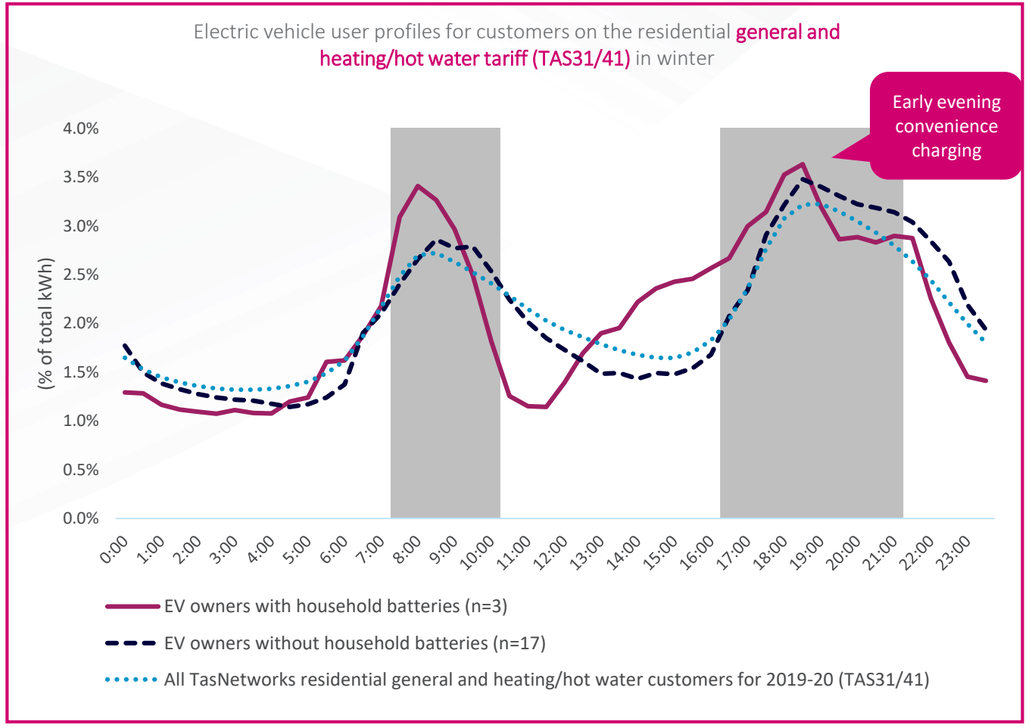
Customers on a **time of use** tariff

- with household batteries seem to respond to **off-peak** network charging windows.
- without household batteries may also be responding to the **off-peak** network charging windows with a spike in their profile after 9pm.

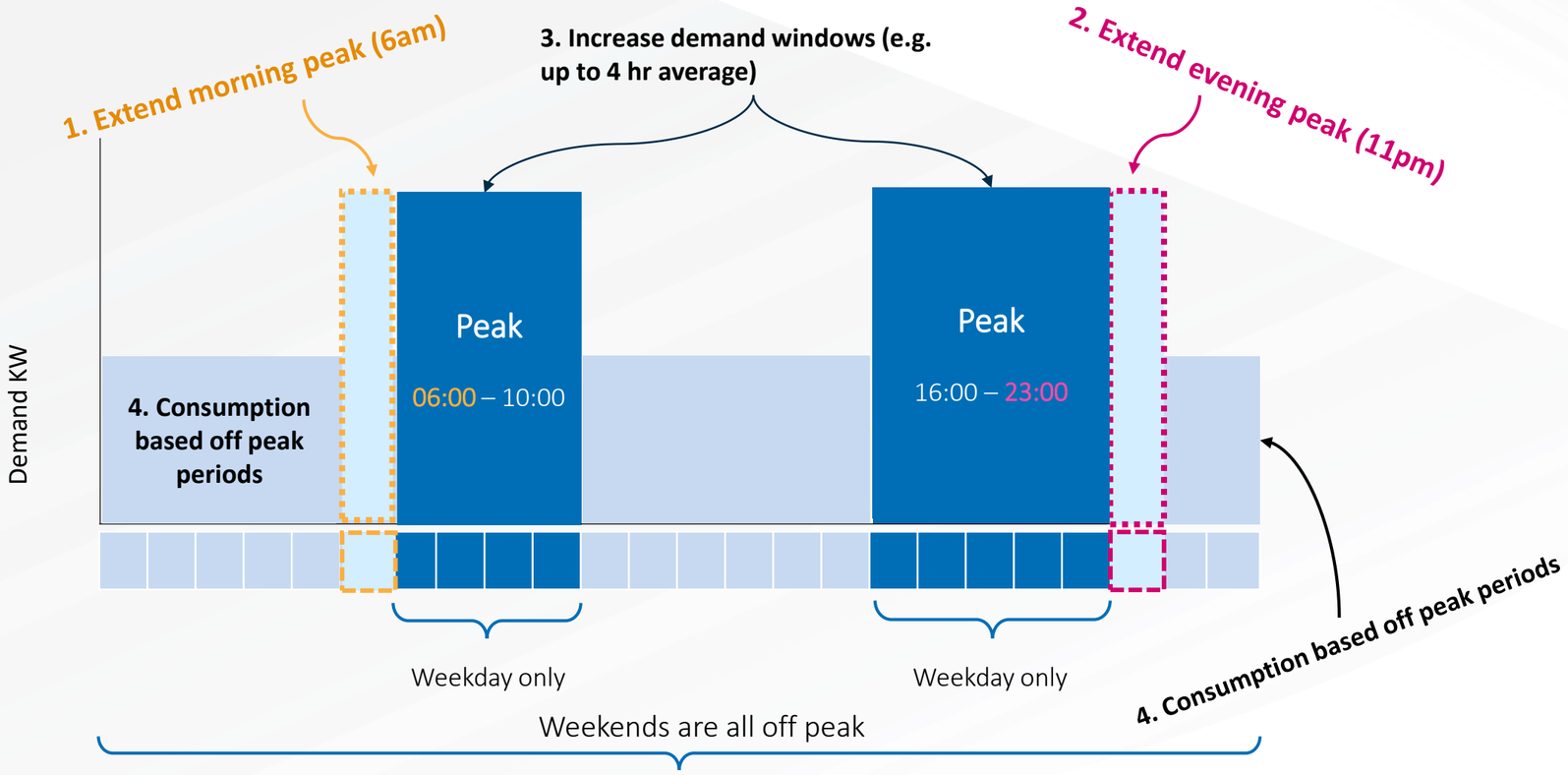


Customers on the **general** tariff and **heating/hot water** tariff

- with and without household batteries seem to charge when it is convenient.



Additional components to consider



Options:

1. Extension of morning peak
2. Extension of evening peak
3. Longer average demand windows
4. Consumption based off peak periods

Additional components to consider

Extension of evening peak

- Current evening peak 4pm – 9pm

Extension of morning peak

- Current morning peak 7am – 10am

Longer average demand windows

- Instead of half-hourly

Consumption based off peak periods

- To make the tariff easier to understand

Menti Time

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Draft Network Assignment Rules

Trigger	Existing network tariff *of the house	Time of Use Consumption Network Tariff	Cooling off period applied
New builds		✓	
Advanced meter installation		✓	✓
Opting into time of use consumption network tariff		✓	
Moving house	✓*		
Actively upgrading to an advanced meter			
Receiving an advanced meter due to end of life or roll-out plan			

Thank you

Should you have questions or comments, please contact Chantal Hopwood at Chantal.Hopwood@tasnetworks.com.au

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